Atlona HDMI 4 by 4 Matrix Switcher over CAT5e/6/7

AT-PRO3HD44M

User Manual

Table of Contents

1. Introduction 3
2. Package Contents 3
3. Features 3
4. Before You Start 3
5. Panel Descriptions
    a. Front Panel 4
    b. Back Panel 5
6. Connection and Installation
    a. 3rd Party Control 6
    b. IR Remote Control 7
    c. Matrix I/O Control 8
    d. I/O Route Memory 9
    d. EDID 9-11
    e. Matrix Status 12
7. RS-232
    a. Connection 13
    b. Set Up 13
8. TCP/IP
    a. RS-232 TCP/IP Set Up 14
    b. LAN TCP/IP Set Up 14-15
9. TCP/IP and RS-232 Control
    a. Commands 15-16
    b. TCP/IP Commands 16
    c. Baud Rate 17
10. Remote Control 18
11. Resetting and Updating 19
12. Specifications 20
13. Safety Information 21
14. Warranty 22
15. Atlona Product Registration 23

Revision B (1/21/13):

Hardware update
New TCP/IP port Page 6

Revision B Part 2 (3/20/13):

TCP/IP Page 15-17
Internal EDIDs Page 11

Introduction

With the latest and more affordable HDBaseT® technology extend HDMI® sources up to 230ft over category cable. The Atlona HDMI 4 by 4 Matrix Switcher allows for effortless control of up to 8 devices through IR, RS-232, TCP/IP and the front panel. With built in S/PDIF ports send audio to an AVR or distribution amp. To ensure all audio passes through, the 4 by 4 Matrix Switcher supports all Lossy and Lossless formats of Dolby® and DTS™ over HDMI.

Package Contents

- 1 x AT-PRO3HD44M
- 1 x 24V/6.25A DC adaptor
- 1 x Power cord
- 1 x IR Extender
- 5 x IR Emitter
- 1 x Remote control
- 1 x Pair of dual purpose wall/rack mounts
- 1 x User Manual

Features

- HDBaseT allows IR, RS-232, audio and visual signals to pass over a single category cable.
- Latest feature of Power over Category cable (PoCc™) enables the matrix to power all compatible receivers.
- IR ports for zone dedicated control through IR remote control and 3rd party control boxes.
- Programmable I/O memories, save I/O routes for faster switching to the most commonly used configurations.
- EDID™ learning function for up to 4 video display EDIDs.
- Multiple control options such as RS-232, IR, TCP/IP, and the front panel.
- Dolby® TrueHD and DTS-HD Master Audio™ pass through HDMI output interface.
- Compatible with DVI/D (with DVI/D to HDMI adapter such as AT-HD610), allowing DVI/D to be passed to displays.
- Built in S/PDIF audio de-embedding for AVR or 2Ch distribution amplifiers. Compatible with PCM 2Channel, Dolby 2.0, Dobly Digital 5.1, and DTS 5.1.
- HDCP compliant

Before You Start

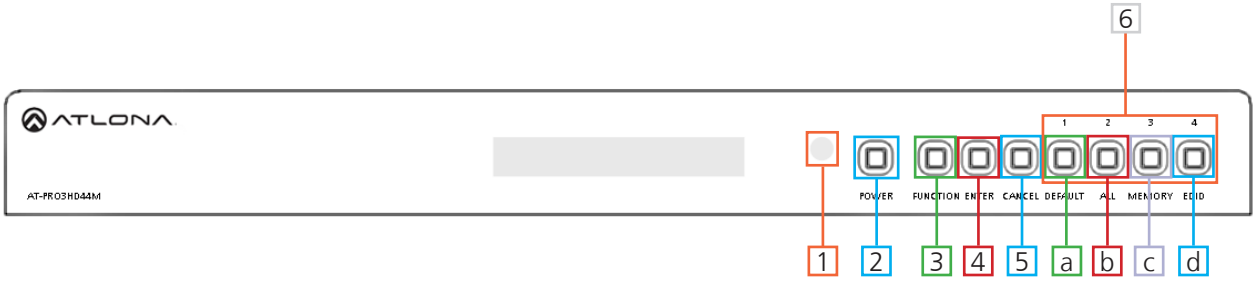
- Make sure when connecting a category cable a 568B termination method is used.
- Make sure the matrix is connected to a component surge suppressor with line conditioning.

Note: *Atlona's warranty does not cover damage due to electrical disturbances. A component surge suppressor with line conditioning is highly suggested, especially in areas with electrical storms.*

- Be sure you're using a mono to mono (2 conductor) 3.5mm IR cable available to purchase at Atlona.com) when using IR output control from 3rd party control boxes, stereo (3 conductor) 3.5mm cables are not compatible.

Panel Description

Front Panel



1. IR Receiver Window - Receives the signal from the included IR Remote Control or a 3rd party control box.
2. Power Button - Cycles the power between On (blue backlight) or Standby (red backlight) mode.
3. Function Button - Select for command options. (blue backlight when selected)
    a. ***Default:*** Mirrors all inputs to corresponding outputs. (i.e. 1 to 1, 2 to 2, 3 to 3, etc.)
    b. ***All:*** Save a single input to all the outputs with this function.
    c. ***Memory:*** Save/load the current input and output route to memory.
    d. ***EDID:*** Save/Load EDIDs to individual inputs.

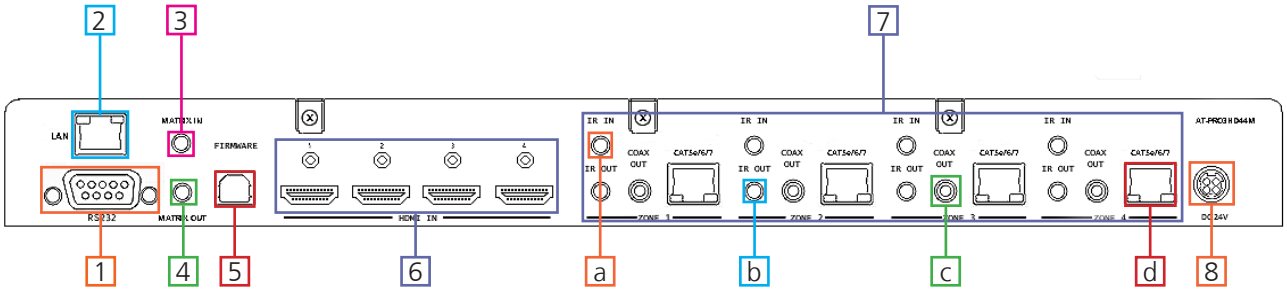
Note: Default setting for EDID is the highest common HD resolution of all connected devices. (i.e. if you have resolutions ranging 720p, 1080i, and 1080p then 720p would be the default resolution for all connected displays.)

4. Enter Button - Use to view current status for inputs and outputs or to confirm a command.
5. Cancel Button - Within the functions menu use to go back one screen or to the home screen.

Note: You cannot power off or change functions unless you go to the home screen.

6. Number buttons - Use these buttons to select input and output paths or use with the function button to change matrix settings.

Back Panel



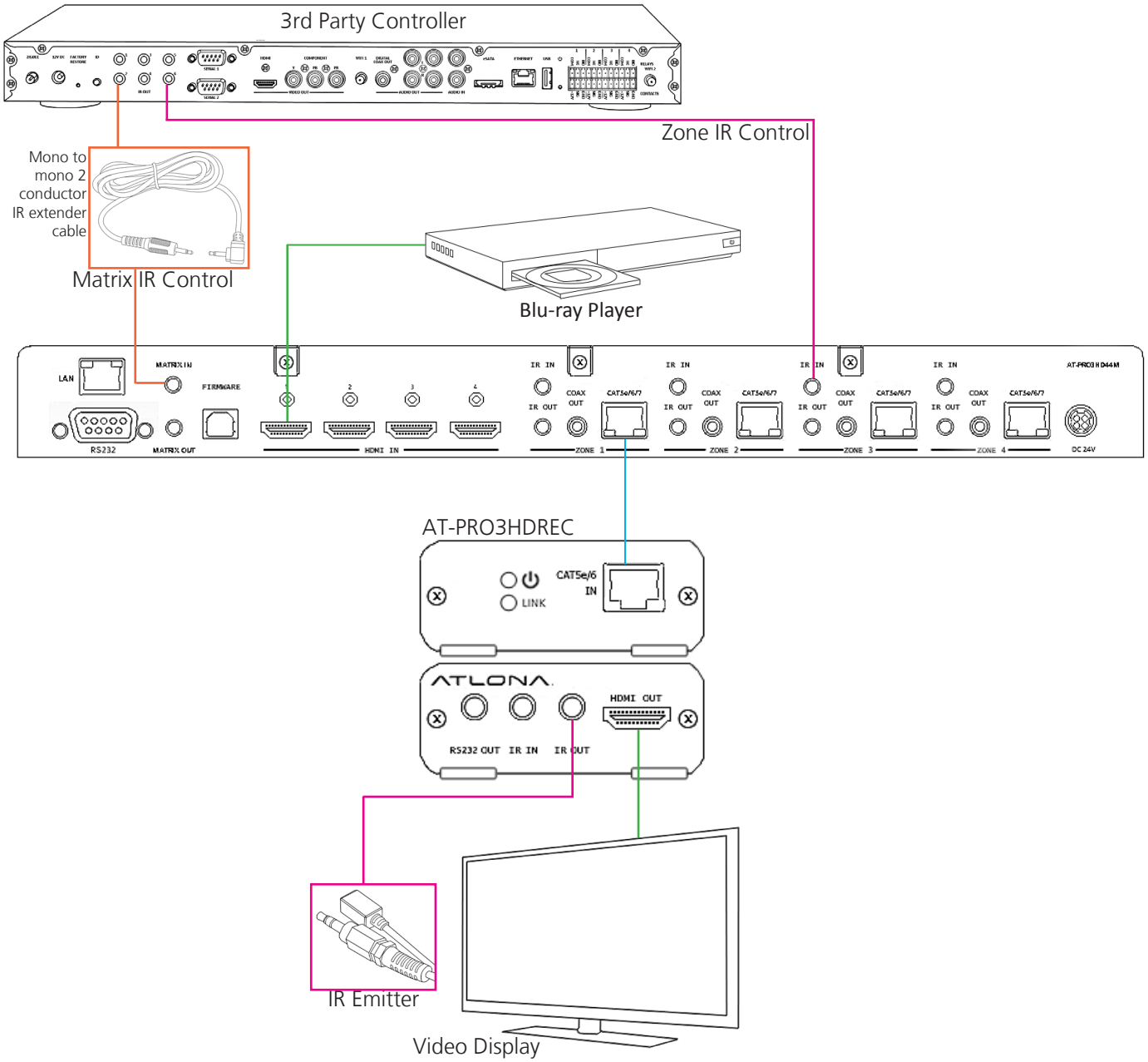
1. RS-232 - Connect to this port for control from a computer or 3rd party control box.
2. LAN Port - For TCP/IP control
3. Matrix IR IN - Used to control matrix I/O switching from a 3rd party IR control box.
4. Matrix IR Out - Global output, combines IR for all incoming zones.
5. Firmware Update - Type B USB Port used for updating matrix firmware
6. HDMI Input Ports - Connect HDMI sources into these ports, such as DVD players, Blu-ray players, computers, etc.
7. Zone dedicated ports
    a. IR 3.5mm mono In ports: Used in conjunction with 3rd party IR control box to extend IR control commands to video displays over category cable.
    b. IR Out ports: Sends IR signal to sources through a 3.5mm IR emitter

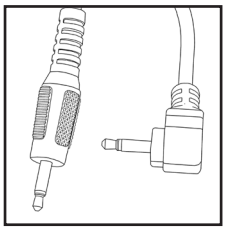
Note: ***Be sure you're using a mono to mono 3.5mm IR cable (i.e. AT-MINIMONO6) for 3rd party control boxes, stereo 3.5mm cables are not compatible.***

    c. Coax Out (S/PDIF): Audio de-embedding for distribution amplifiers and AVRs. Compatible with LPCM 2Channel, Dolby 2.0, Dolby Digital 5.1, and DTS 5.1.
    d. CAT5e/6/7 Out (RJ45): Extends video and bi-directional RS-232, IR, and audio signals through a single category cable.
8. Power Port - Use included locking DC adaptor to power the matrix switcher

Connection and Installation

3rd Party Control box Set Up



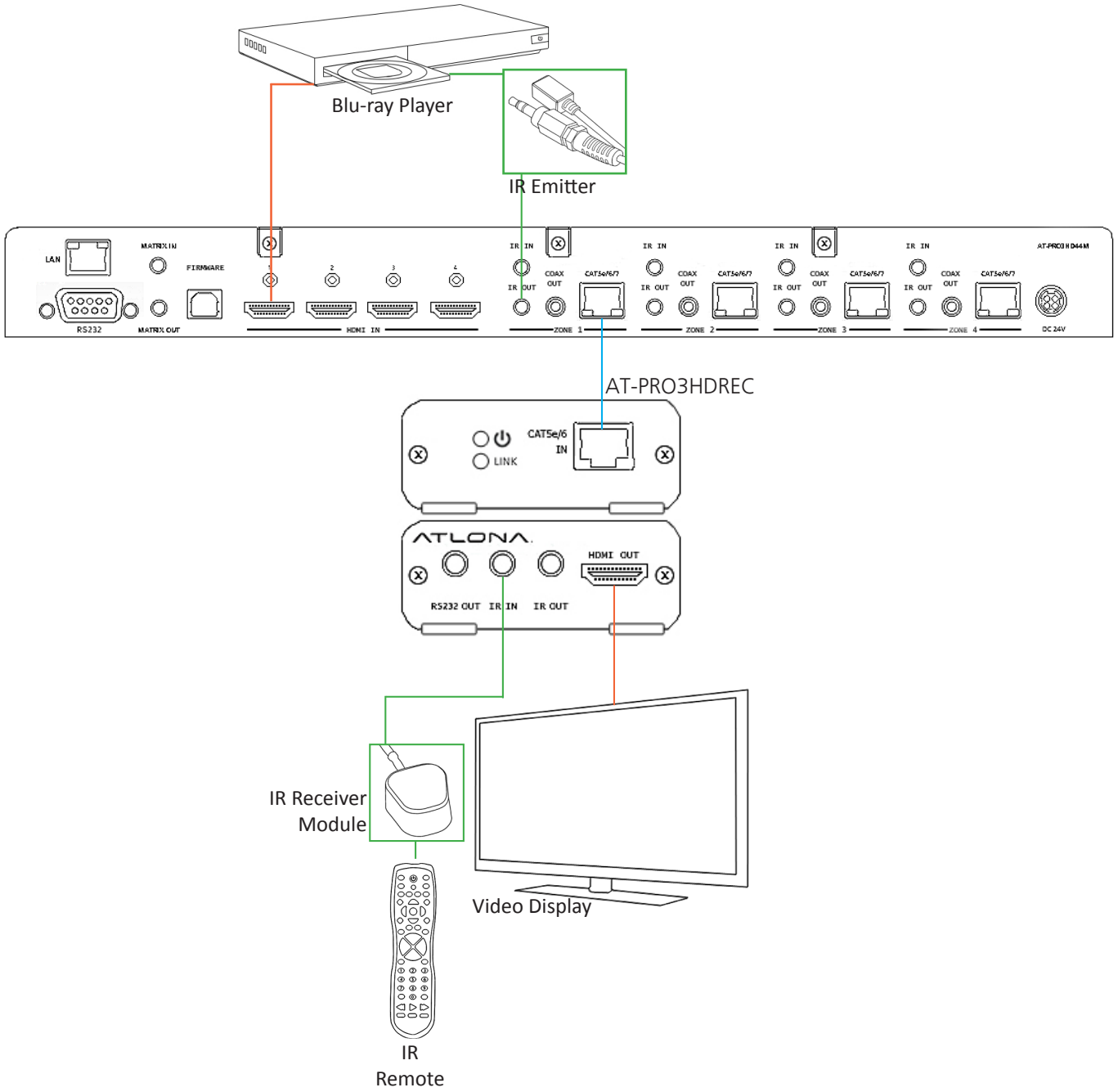


With the feature of the IR in ports the AT-PRO3HD44M has the unique ability to receive IR commands from a 3rd party controller and send it out through the CAT5e/6/7 port to control the displays in any zone.

Note: *Be sure to use a mono to mono (2 conductor) 3.5mm IR extender from the 3rd party controller to the AT-PRO3HD44M*

IR Remote Control Set Up

Note: *When using an IR remote control all sources can be controlled as well as the local display.*



Matrix Front Panel Functions

The AT-PRO3HD44M's front panel has 3 functions: I/O control, EDID, and matrix settings. The following sections go over step by step setup & control.

I/O Control

To **set** an input to an output

(I.E. Input 1 to output 2)

home screen
AT-PRO3HD44M
Select Input Number
---> *input selection* 1 2 3 4 ---> ENTER ---> Select output number
Press enter to confirm --->

output selection 1 2 3 4 ---> ENTER ---> *Feedback* ="Input # saved to Output #"

To **mirror** all inputs and outputs

(I.E. Input 1 to output 1, input 2 to output 2, etc.)

home screen
AT-PRO3HD44M
Select Input Number
---> FUNCTION ---> Select Function Option ---> DEFAULT ---> Mirror In to Out
Press enter to confirm

---> ENTER ---> *Feedback* ="Mirroring In and Out"

To **route** one input to all outputs

(I.E. Input 1 to output 1, 2, 3, and 4)

home screen
AT-PRO3HD44M
Select Input Number
---> FUNCTION ---> Select Function Option ---> ALL ---> Select input number
to save to all outputs

---> *input selection* 1 2 3 4 ---> Input # to all outputs
Press enter to confirm ---> ENTER ---> *Feedback* =
"Input # saved to all"

I/O Route Memory

Once inputs and outputs have been set they can be saved to memory and recalled later. Up to 4 individual input/output routes can be saved. The route will remain in memory until a new route has been saved to that memory number or the matrix has been factory reset.

example route

O: 1 2 3 4
I: 4 2 1 3

To **save** an I/O route to memory

home screen
AT-PRO3HD44M
Select Input Number
---> FUNCTION ---> Select Function Option ---> MEMORY ---> 1 Save in/out route
2 Select memory route --->

1 ---> Save to memory (1-4) #
Press enter ---> ***memory selection*** 1 2 3 4 ---> ENTER ---> *Feedback =*
"Memory # saved"

To **load** a saved I/O route

Once an input/output route has been saved, it can be loaded at any time.

home screen
AT-PRO3HD44M
Select Input Number
---> FUNCTION ---> Select Function Option ---> MEMORY ---> 1 Save in/out route
2 Select memory route --->

2 ---> Select Memory route 1-4
Press enter to load ---> ***memory selection*** 1 2 3 4 ---> ENTER ---> *Feedback =*
"Memory # loaded"

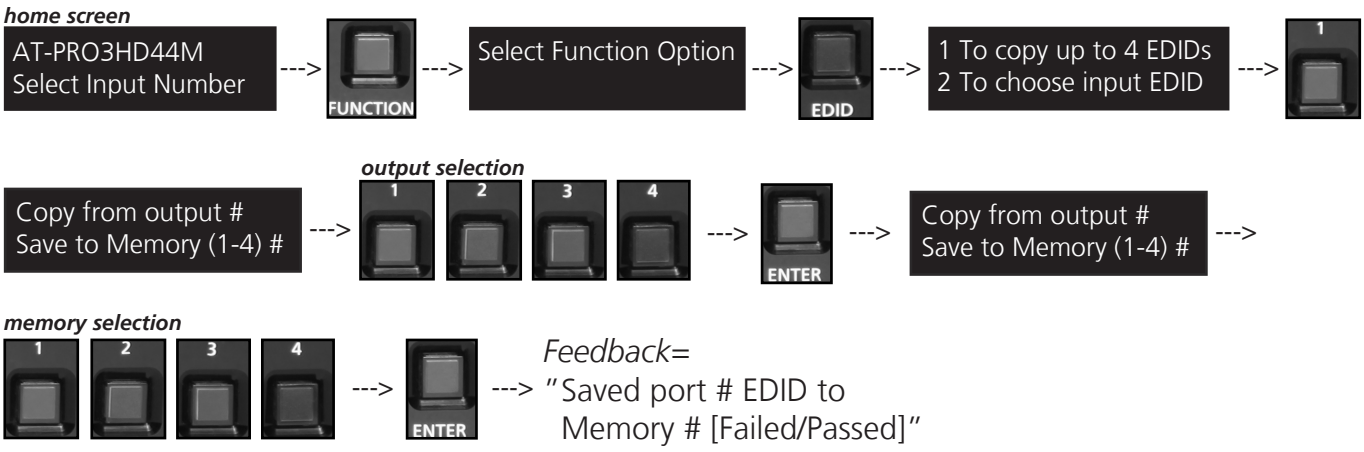
EDID Set Up

When the matrix is completely connected and turned on it will load the **default EDID**, which is the highest common native resolution of the devices. (*i.e. In the diagram below the default would be 720p with 2ch audio.* **Multi-channel audio and 3D are not enabled on internal mode, unless all devices have these features.**)

On default, all devices in the diagram will work at 720p. If a device is not syncing or a different resolution is required, internal EDID or EDID copy and load should resolve these issues. The PRO3HD can copy up to 4 EDIDs to memory.

Step 1: copy an EDID

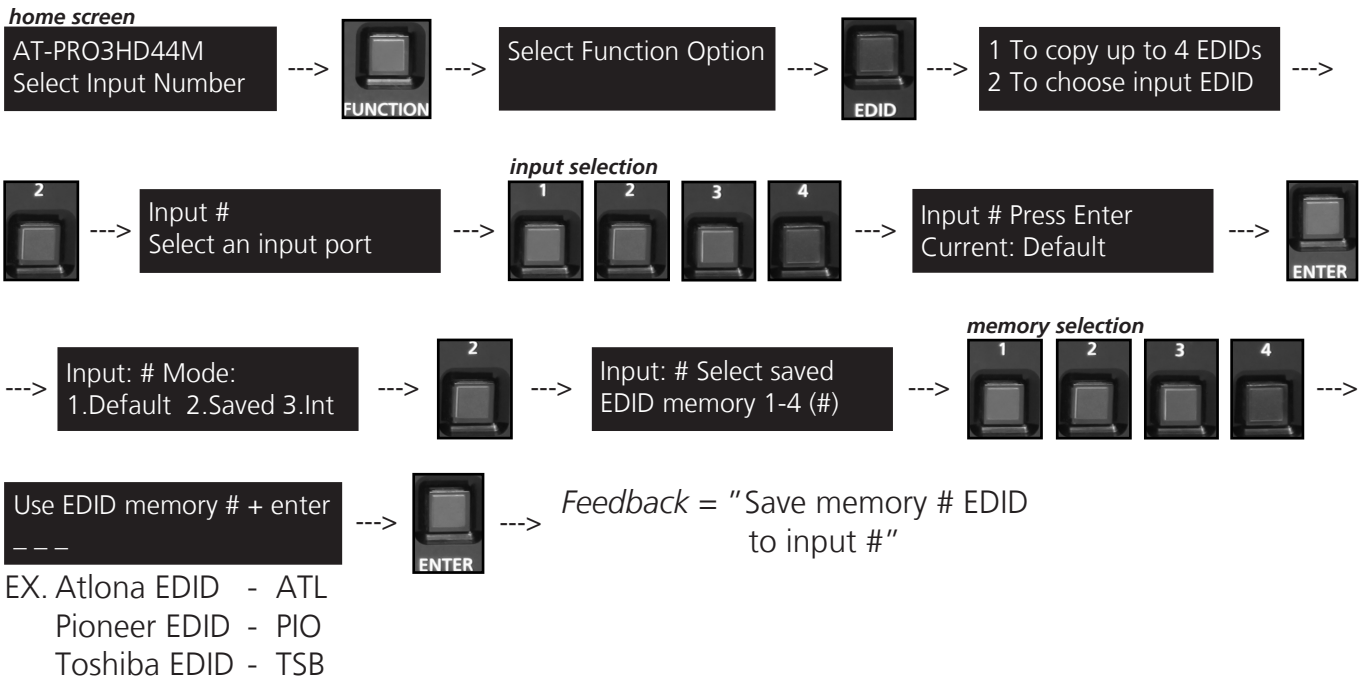
Before an EDID can be loaded to an input, it must first be copied to the matrix's memory. Each display's EDID can be saved individually to one of the matrix's four preset EDID memories.



Step 2: load a copied EDID onto an input

Once EDIDs have been copied to memory they can be loaded to a specific input.

Note: (refer to the diagram on page 9) Using the EDID of output 3 with input 1 will enable 1080p, 3D, and Dolby TrueHD to pass. Output 2 will receive no audio or video and output 1 will receive no audio with these settings.



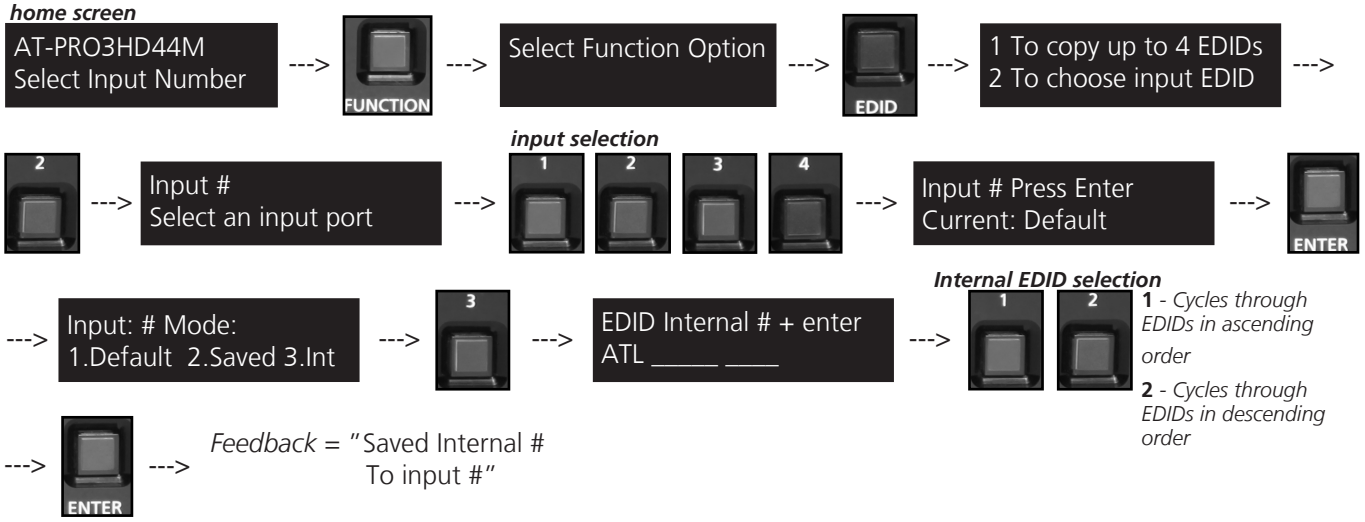
EX. Atlona EDID - ATL
Pioneer EDID - PIO
Toshiba EDID - TSB

Step 3: Load an internal EDID on an input

If the first two steps don't produce the correct resolution or audio configuration, the twelve internal EDIDs should resolve the issue.

Internal EDID options	*Front panel display readout*
EDID 1: 1080P 2CH audio	ATL 1080P 2CH
EDID 2: 1080P multichannel audio*	ATL 1080P Multi CH
EDID 3: 1080P Dolby Digital 5.1**	ATL 1080P DD
EDID 4: 1080P 3D 2CH audio	ATL 1080P 3D 2CH
EDID 5: 1080P 3D Multi Channel Audio*	ATL 1080P 3D Multi CH
EDID 6: 1080P 3D Dolby Digital 5.1**	ATL 1080P 3D DD
EDID 7: 720P 2CH audio	ATL 720P 2CH
EDID 8: 720P Dolby Digital 5.1**	ATL 720P DD
EDID 9: 1280x800 RGB 2CH Audio	ATL 1280x800 RGB 2CH
EDID 10: 1366x768 RGB 2CH audio	ATL 1366x768 RGB 2CH
EDID 11: 1080P DVI***	ATL 1080P DVI
EDID 12: 1280x800 DVI***	ATL 1280x800 RGB DVI

* Recommended EDID for use of an AVR
** Recommended EDID for use of the S/PDIF audio de-embedding
*** Recommended EDID for use of DVI projectors



RS-232 commands:

To access the different EDIDs through RS-232 the following commands must be used.

Command	Feedback	Description
EDIDMSetX default	EDIDMSetX default	Sets the EDID of an input to the default EDID Ex. EDIDMset2 default - sets input 2 to default
EDIDMSetX saveY	EDIDMSetX saveY	Sets the EDID of an input to the previously saved EDID memory Ex. EDIDMset1 save3 - sets input 1 to the EDID memory 3
EDIDMSetX intZ	EDIDMSetX intZ	Sets the EDID of an input to one of the internal EDIDs Ex. EDIDMset3 int6 - sets input 3 to the internal EDID - 1080p 3D Dolby Digital 5.1

Matrix Status

When installing or troubleshooting it's important to verify settings, or be able to come back to a project and see how it was set up. The AT-PRO3HD44M matrix settings are viewable through the front panel display. View current I/O settings, firmware version, FPGA version, and the baud rates of not just the matrix but extenders as well.

View current I/O **settings**

home screen
AT-PRO3HD44M
Select Input Number
--->

--->
O 1 2 3 4
I x x x x

View Firmware/Baud Rate/FPGA **settings**

home screen
AT-PRO3HD44M
Select Input Number
--->

---> Select Function Option ---> Hold for 5 seconds

--->

AT-PRO3HD44M
FW Ver: 0.3.XX

--->

---> AT-PRO3HD44M
Console: X X X X
Matrix Baud Rate

EX. 115200 8 None 1
OR
9600 8 ODD 0

--->

---> AT-PRO3HD44M
Port 1: X X X X
Output Baud Rate
--->

Press 3 to cycle through the baud rates of each output port.

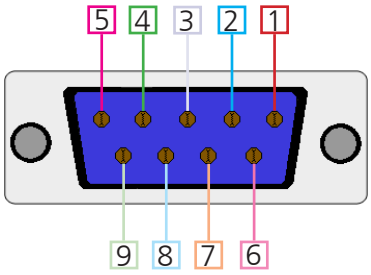
--->

---> AT-PRO3HD44M
FPGA 1 Ver: 0.0.XX
FPGA Version

RS-232

Connection

RS-232 is connected through a 9-pin female DB connector. Only pins 2, 3, and 5 are terminated.



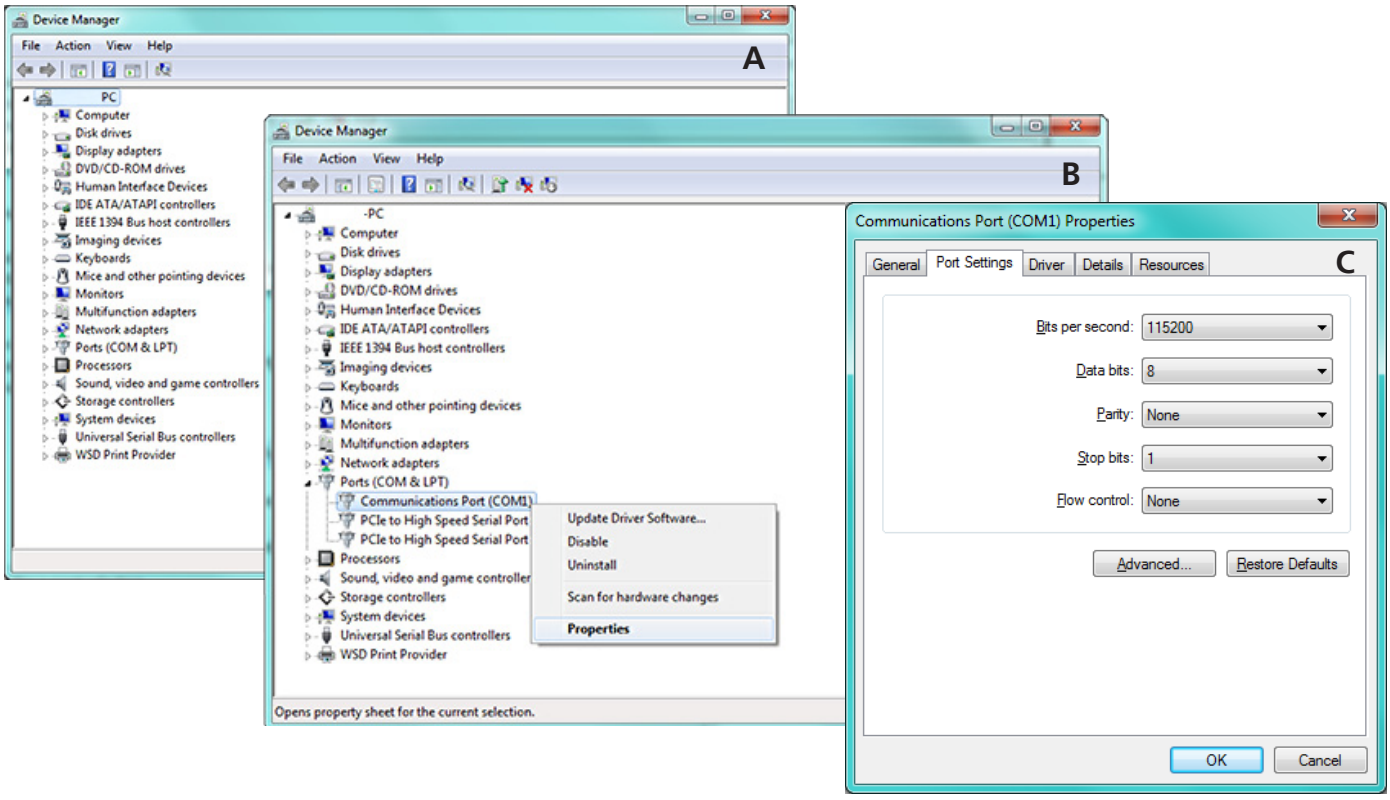
No.	Pin	Function
1	----	Not used
2	Tx	Transmit
3	Rx	Receive
4	----	Not used
5	Gnd	Ground
6	----	Not used
7	----	Not used
8	----	Not used
9	----	Not used

Set Up

To set up the RS-232 hyperterminal (if not using 3rd party software) use the following steps:

1. Connect the matrix to a PC using a 9pin to 9pin cable
2. Go to the Device manager folder (see picture A)
3. Find the Matrix COM port and right click with a mouse and select properties (see picture B)
   NOTE: If unsure which COM port is the matrix, unplug the 9pin cable and plug it back in. It will disappear and reappear on the COM port list.
4. Under the properties menu select the port settings tab and update the menu to the **matrix default settings of**: Bits Per Second: 115200, Data Bits: 8, Parity: None, Stop Bits: 1 and Flow Control: None. (see picture C)

Set up is done and any hyperterminal program may be used to control the matrix now.



TCP/IP

Warning!: Do not connect the matrix LAN port until the first steps have been followed.

BEFORE YOU PLUG IN ANYTHING: Verify no other devices on the network have the IP of 192.168.1.10 (the matrix default is 192.168.1.10).

There are two ways to set TCP/IP control when any of the products on the network have the same IP address as the matrix: RS-232 or through LAN on a non networked computer.

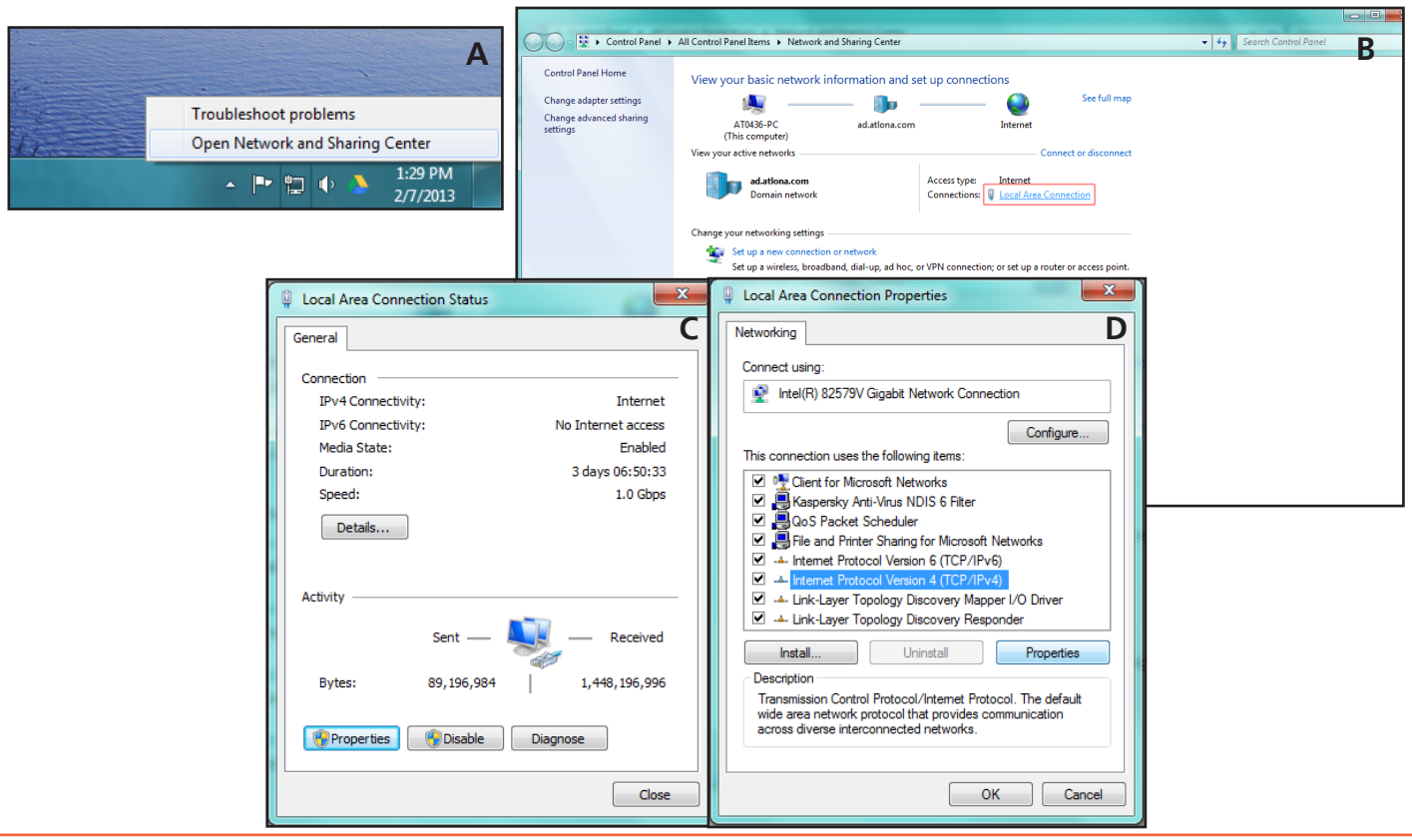
RS-232 TCP/IP Set up (Preferred)

Step 1: Follow RS-232 set up instructions on page 13
Step 2: Open Hyperterminal program
Step 3: Verify DHCP is off
Send command "IPDHCPsta" followed by a carriage return
Feedback should be "DHCPoff"
If DHCP is on use command "IPDHCPoff" to turn DHCP off
Step 4: Change the current IP using the command "IPStatic 192.168.0.**200** 255.255.255.0 192.168.0.1" (Router IP address)
IP can be anything that system devices aren't currently using. (200 is just an example)
Step 5: (optional) Change the port using the command "IPPort 4400" followed by a carriage return
4400 is just an example. The port can be changed to what is needed/wanted

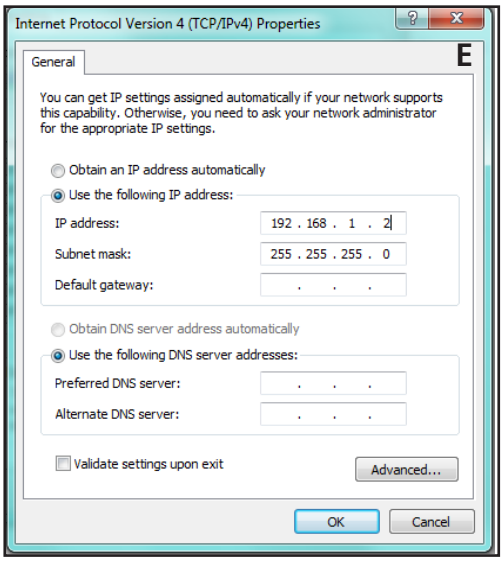
The matrix is now ready to be used for TCP/IP control. The LAN cable may be connected now.

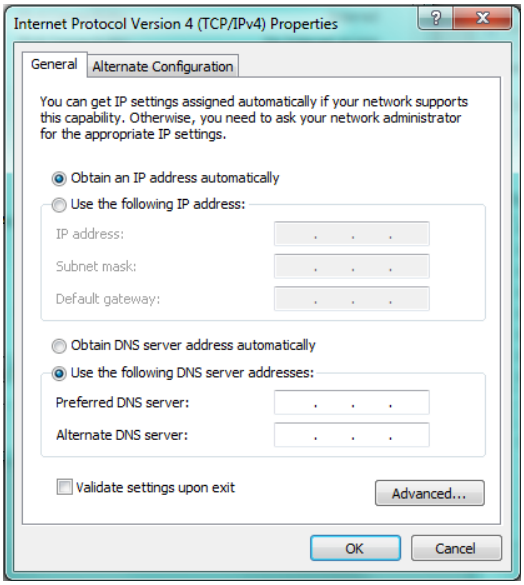
LAN TCP/IP Set up (If RS-232 is not available)

Step 1: Connect LAN to a computer
Step 2: Right click the network icon at the bottom right side of screen and open network and sharing center on PC (see picture A)
Step 3: Select internet type connection/local area connection (see picture B)
Step 4: Select properties (see picture C)
Step 4: Select IP V.4 and press properties (see picture D)



Step 5: Change IP to 192.168.1.2 and Subnet: 255.255.255.0 (see picture E)
Step 6: Press apply
Step 7: Close internet type connection and launch IP software
Log in:
Host: 192.168.1.10 (matrix IP)
Port: 23 (matrix port)
Step 8: Verify DHCP is off
Send command "IPDHCPsta" followed by a carriage return -- Feedback should be "DHCPoff"
If DHCP is on use command "IPDHCPoff" to turn it off
Step 9: Change the current IP using the command (Router IP address)
"IPStatic 192.168.0.**200** 255.255.255.0 192.168.0.1"
IP can be anything the system devices aren't currently using. (200 is just an example)
* This will cause the IP software to close *
Step 10: Go back to your network settings and return the IP V.4 to the original settings ---------->
Step 11: Reopen the IP software
Log in:
Host: 192.168.0.200 (new matrix IP)
Port: 23 (matrix port)
Step 10: (optional) Change the port using the command "IPPort 4400" + carriage return
4400 is just an example. The port can be changed to what is needed/wanted
This will cause the IP software to close
Step 11: Relog into IP software
Log in:
Host: 192.168.0.200 (new matrix IP)
Port: 4400 (new matrix port)
The matrix is now ready to be used for TCP/IP control.


Internet Protocol Version 4 (TCP/IPv4) Properties
E
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 1 . 2
Subnet mask: 255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel


Internet Protocol Version 4 (TCP/IPv4) Properties
General
Alternate Configuration
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel

Commands

The command codes are case sensitive, do not change capitalization, spacing, or lettering.

Command	Feedback	Description
PWON	PWON	Power on
PWOFF	PWOFF	Power off
PWSTA	PWx	Will display the power status of the matrix (ex. Power is on = PWON)
Version	(Firmware #)	Brings up the current firmware version
Lock	Lock	Locks the front panel of the matrix so no buttons are active
Unlock	Unlock	Unlocks the front panel of the matrix, enabling the buttons again
All#	x1AVx1,x2AVx2,...	Resets all inputs to corresponding outputs (in3 to out3)
x1$	x1$	Turns off output channel (to turn off output 3 = x3$)
x1AVx2	x1AVx2	Switch input to output (input 3 to output 2 = x3AVx2)
x1AVx2,x3,x4	x1AVx2,x3,x4	Switch input to multiple outputs (input 3 = x3AVx1,x2)
IRON	IRON	Turns on the IR receiver
IROFF	IROFF	Turns off the IR receiver

Command	Feedback	Description
Statusx1	x7AVx1	Shows what input is connected to selected output
Status	x1AVx1,x2AVx2, x3AVx4, ...	Displays which inputs are currently connected to which outputs
Save**Y** (ex. Save2)	Save**Y** (ex. Save2)	Saves settings for future use, preset options 0 to 4
Recall**Y** (ex. Recall2)	Recall**Y** (ex. Recall2)	Recalls saved settings for the number you selected
Clear**Y** (ex. Clear2)	Clear**Y** (ex. Clear2)	Erases the save for the number you selected
Mreset	Mreset	Sets matrix back to the default settings
RS232zoneX[command] ex: RS232zone1[PWON]	RS232zoneX[command] ex: RS232zone1[PWON]	Send commands to devices connected to the receiver RS-232 ports. Commands are the same as the ones stated in this table. X = zone number example: Turning the power on for the device connected in zone 1

Each command or feedback is terminated with a carriage return.
Note: If the command fails or is incorrect the feedback should be "Command FAILED"

TCP/IP Commands

Command	Feedback	Description
IPCFG	IP Addr : x.x.x.x Netmask : x.x.x.x Gateway : x.x.x.x IP Port: x.x.x	Displays IP address configuration
IPTimeout XX	IPTimeout XX (Ex. IPTimout120)	Determines amount of seconds of inactivity before TCP/IP disconnects
IPQuit	IPQuit	Logs out of TCP/IP
IPAddUser	TCP/IP username & password list: - user password - user password - user password	Will display a list of users
IPAddUser [X] [Y]	TCP/IP user was added	Add a user for TCP/IP control. X=User Y=Password Ex. IPAddUser Atlona 1234 (User=Atlona 1234=Password)
IPDelUser [X]	TCP/IP user was deleted	Delete a user from TCP/IP X=User (Ex. IPDelUser Atlona)
IPDHCP sta	IPDHCP sta Ex. IPDHCP on	Displays the status of DHCP
IPDHCP on	IPDHCP on	Turns DHCP on
IPDHCP off	IPDHCP off	Turns DHCP off
IPStatic [X] [Y] [Z]	IPStatic address netmask gateway	Sets a static IP address Ex. IPStatic 192.168.1.1 255.255.255.0 192.168.1.200
IPPort	IPPort Y	Set the TCP/IP port (ex. IPPort 230)
IPLogin sta	IPLogin sta Ex. IPLogin on	Displays IPLogin status
IPLogin on	IPLogin on	Enables IPLogin
IPLogin off	IPLogin off	Disables IPLogin
Broadcast sta	Broadcast sta	Displays broadcast mode status
Broadcast on	Broadcast on	Enables broadcast mode
Broadcast off	Broadcast off	Disables broadcast mode

Baud Rate

Default baud rates of the matrix and receivers have been set for the best compatiblity with other devices (i.e. projectors). Baud rates should not be changed unless an incompatibility occurs.

To change the baud rate of the matrix or the receiver (AT-PRO3HDREC) an RS-232 hyperterminal will be needed. Once the RS-232 hyperterminal is set up changing the baud rate will be done with a command line. **The baud rate for the matrix is for matrix control and the output baud rate is for control of the RS-232 device in the zone being controlled.**

Note: *Baud rate options 2400, 4800, 9600, 19200, 38400, 57600, or 115200*

Command for Matrix baud rate

CSpara[baudrate,data-length,parity,stop-bit] (data, parity, and stop for matrix must be 8,0,1)

For example if you wish to change the baud rate to 38400 the command would look like this:
CSpara[38400,8,0,1]

Note: *Default for the matrix is: Baud-115200bps, Data length-8bit, Parity-None, Stop Bit-1*

RS-232 Command for the Output baud rate status

RS232para

The RS-232 status command will provide feedback for the current parameters for each output.

Example: (See example of feedback below)

RS232para
Current RS232 parameter:
- Port 1 :BaudRate 2400bps, DataBits 0, Parity None, StopBits 1.
- Port 2 :BaudRate 9600bps, DataBits 0, Parity ODD, StopBits 1.
- Port 3 :BaudRate 9600bps, DataBits 0, Parity None, StopBits 1.
- Port 4 :BaudRate 9600bps, DataBits 0, Parity None, StopBits 1.

Note: *Default for the outputs is: Baud-9600bps, Data length-8bit, Parity-None, Stop Bit-1*

The ability to check baud rate status on the outputs will help to identify control compatibility for in zone RS-232 devices.

Command for Output (receiver) baud rate

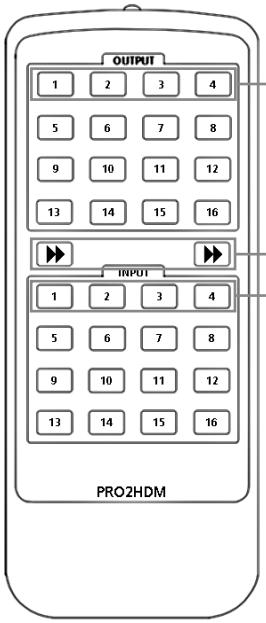
RS232paraX[baudrate,data-length,parity,stop-bit]

X represents the zone# (output#), the data length must be 7 or 8, partity bit will be 0 for none, 1 for odd, 2 for even, and the stop-bit must be 1 or 2.

For example if you wish to change the baud rate to 19200, data length 8, ODD parity, and 1 stop-bit on the receiver in zone 3 to 19200 the command would look like this:

RS232para3[19200,8,1,1]

Remote Control



Output selection. Numbers correspond with the category cable outputs (1-4) on the matrix.

Arrow buttons are not functional for this product.

Input selection. Numbers correspond with the HDMI inputs (1-4) on the matrix.

Updating and Resetting

Updating firmware

Atlona has made field firmware updating easy. Simply download firmware from Atlona.com and upload the file to the matrix.

NOTE: Only use a Windows computer to update the matrix. Use of an Apple computer to update will cause the matrix to be unusable until the update is redone with a Windows computer.

Needs:

- Verify the current firmware version
- RS-232 9 Pin to 9 Pin cable.
- PC (not compatible with MAC)
- OS that supports USB mass storage devices
- USB A to USB B cable (i.e. AT11008)

To **view** the current firmware use RS-232 command "**Version**".

Preparing the Matrix:

- Unplug the power cable.
- Hold the Cancel button while plugging the power back in.
- Connect the USB B to USB A cable into the Matrix and the Computer.

Updating the Matrix:

The computer should auto detect the connection, if it does not, open the USB device from "my computer".

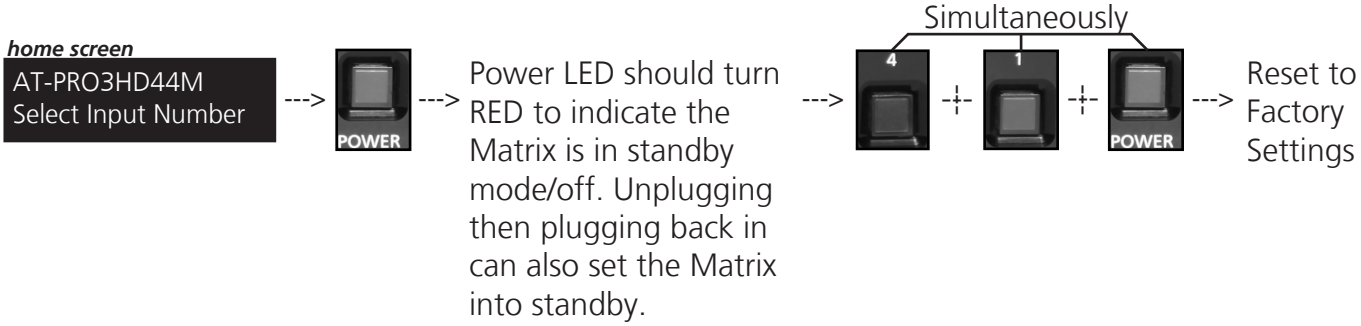
- Click open in a new folder. (if auto run detects connection)
- Delete the file in the folder. (there should be only one file, if more, delete all files)
- Copy and Paste the new firmware file into the USB folder.
- Unhook the Matrix from the computer.
- Unplug the power cable from the AT-PRO3HD44M
- Plug the power back in and start the matrix normally. Your update should be complete

If you wish to verify the new firmware, use the RS-232 command "**Version**".

Resetting to factory settings

Atlona understands that settings can be troublesome and at times its just easier to set things back to factory settings. To make things easier a simple one step reset was created.

To reset the matrix, hold down the buttons 1 and 4 while powering on. If successfull the matrix will be back to factory settings when it turns on.



Specifications

Bandwidth	6.75Gbps
Ports Video input Video output Audio output IR input IR output Control: RS-232 Control: TCP/IP Firmware update	 4 x HDMI 4 x RJ45 4 x S/PDIF 5 x 3.5mm 5 x 3.5 mm 1 x 9pin (RS-232) 1 x RJ45 1 x USB B
Power Consumption	60W
Audio	Passes up to Dolby TrueHD or DTS-HD Master Audio
Distance	230ft (70m) @ 1080p over CAT6a/7 197ft (60m) @ 1080p over CAT5e/6
Resolution	Video: up to 1080p@60Hz VESA: up to 1920x1200
Dimensions	1.69 x 17.13 x 10 (inch) 42.93 x 435.10 x 254 (mm)
Weight	7 lbs 3.18 kg
Rack Size	1 U, 19 in. standard electronics rack
Temperature	Operating: 32°F to 104°F (0°C to 40°C) Storage: 4°F to 140°F (20°C to 60°C)
Certifications	CE, FCC, RoHS, cULus for power supplies

Safety Information

Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

Do not modify the wall plug. Doing so will void the warranty and safety features.

This equipment should be installed near the socket outlet and the device should be easily accessible in the case it requires disconnection.

Precautions

FCC regulations state that any unauthorized changes or modifications to this equipment, not expressly approved by the manufacturer, could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product, or cause fires.

In the event of an electrostatic discharge this device may automatically turn off. If this occurs, unplug the device and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements, fish tanks, and swimming pools.

Use only accessories recommended by Atlona to avoid fire, shock, or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning and not cleaning fluid or aerosols. Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

Never open, remove unit panels, or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your AT-PRO3HD44M. Opening the product will void the warranty.

Do not attempt to service the unit. Disconnect the product and contact your authorized Atlona reseller or contact Atlona directly.

Warranty

Limited Warranty

Atlona Technologies warrants that (a) its products (AT-PRO3HD44M) will perform substantially in accordance with the accompanying written materials for a period of 3 years from the date of receipt and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to customers that fall within those areas.

Customer Remedies

Atlona Technologies' and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' decision, either return of the price paid for the product, repair, or replacement of the product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of the Customer's receipt. This Limited Warranty is void if failure of the product has resulted from accident, abuse, misapplication, or natural occurrence. In example but not limited to: power surges (electrical storms, local power outage), dropping the product (or items on the product), contact with fluids, and physical misconduct (i.e. kicking or punching). Any replacement product will be warranted for the remainder of the original warranty period.

No other warranties

To the maximum extent permitted by applicable law, Atlona Technologies and its suppliers disclaim all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product and any related written materials. This Limited Warranty gives customer specific legal rights. Customers may have other rights depending on the jurisdiction.

No liability for damages

To the maximum extent permitted by applicable law, in no event shall Atlona Technologies or its suppliers be liable for any damages arising out of the use of or inability to use this product, even if Atlona Technologies has been advised of the possibility of such damages. Such damages include but are not limited to: special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss. Atlona Technologies' and its suppliers' entire liability under any provision of this agreement shall be limited to the amount actually paid by you for the product. Some Jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damage. The above limitations may not apply to you in such jurisdictional cases.

Atlona Product Registration

Thank you for purchasing this Atlona product. - We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona, we respect and protect your privacy, assuring you that your registration information is completely secure. Atlona product registration is completely voluntary and failure to register will not diminish your limited warranty rights.

To register go to: http://www.atlona.com/registration